

REMARKS

Claims 2 and 12 have been rejected under 35 USC 112, second paragraph, as being indefinite. Specifically, the Examiner finds the limitation a “Shore hardness of notes less than 50°” in these two claims indefinite. Claims 2 and 12 have been amended to specify that the Shore hardness is “Shore D hardness.” This amendment is supported by the specification on pages 7 and 20 of the application, which clearly states that applicants used the Shore D hardness scale. In accordance with the Examiner’s statement that the Shore hardness is dimensionless, the degree symbol has also been removed from these claims. Accordingly, the rejection of claims 2 and 12 under 35 USC 112, second paragraph, should be withdrawn.

The Examiner has objected to the specification because the degree symbol follows the Shore D hardness measurements in the specification. Applicants have removed these symbols. Accordingly, this objection should be withdrawn.

Claims 2 and 12 stand rejected under 35 USC 112, first paragraph. The Examiner states that the Shore hardness is “critical or essential to practice of the invention” but is not included in the claims. Further, the Examiner states that applicants never provided which Shore hardness scale is being used to measure the photosensitive resin layer. As discussed above, claims 2 and 12 have been amended to specify that the Shore hardness is a Shore D hardness. Pages 7 and 20 of the specification show that applicants used the Shore D hardness scale to measure Shore hardness. Accordingly, this rejection should be withdrawn.

Claims 10 and 20 stand rejected under 35 USC 112, second paragraph. Specifically, the Examiner is confused by the phrase “back of the support.” This rejection is respectfully traversed. One of ordinary skill in the art would recognize that the back of the support is the side opposite the front of the support which includes the

adhesive layer and/or the photosensitive resin layer. Accordingly, this rejection should be withdrawn.

Claims 1-5, 7, 8, 11-15 and 17 stand rejected under 35 USC 102(b) as being anticipated by Platzer. The Examiner also cites to Kelly and Pears in support of this rejection. This rejection is respectfully traversed.

Independent claim 1 claims a photosensitive resin laminate having a light transmission of not less than 60% that includes a photosensitive resin layer that has a thickness of not less than 500 μm . Independent claim 11 claims a photosensitive resin laminate that satisfies the following formula (1):

$$\{(A-B)/A\} \times 100 \leq 15 \quad (1)$$

wherein A is a total light transmission (%) of the support and B is a total light transmission (%) of the photosensitive resin laminate and the laminate includes a photosensitive resin layer that has a thickness of not less than 500 μm .

As described in the specification, the claimed laminates have properties that make them useful for signboards and other transparent objects. Specifically, the claimed laminates have good light transmission characteristics and good durability that allows them to be bent when being formed into products such as signboards.

Applicants have found that when the total light transmission of the photosensitive resin laminate is less than 60%, the photosensitive resin laminate may be colored or opaque, degrading the appearance of finished products produced from the laminates. Further, applicants have found that when the light transmission of the laminate is less than 60%, color tone may vary during post-processing modifications such as painting.

Further, when the total light transmission of the photosensitive resin laminate and the total light transmission of the support fail to satisfy the formula (1), which is included in claim 11, the photosensitive resin laminate can have a poor appearance due to unwanted coloring and turbidness, which can affect color tone during post-processing

modifications such as painting.

Platzer describes a transparent film support and an uncolored photopolymerizable layer. The uncolored photopolymerizable layer only corresponds to the photosensitive resin layer of the present invention. Applicants claim a photosensitive resin laminate, which has specific light transmission characteristics. Platzer fails to describe or even mention the total light transmission of the photopolymerizable material and the film support together, which would correspond to the photosensitive resin laminate of the present invention. Further, Platzer fails to provide a photopolymerizable material which possesses light transmission properties within the claimed ranges.

Since Platzer does not describe or suggest a photosensitive resin laminate with the properties claimed in claims 1 and 11, the rejection of these claims should be withdrawn. The rejection of claims 2-5, 7, 8, 12-15 and 17, which depend from these claims, should be withdrawn for at least the same reasons.

Claims 1-5, 8-15, 19 and 20 stand rejected under 35 USC 102(e) as being anticipated by Vreeland. Claims 7 and 17 stand rejected as obvious over Vreeland. These rejections are respectfully traversed.

As described above, claims 1 and 11 claim a photosensitive resin laminate that has specific light transmission characteristics. The photosensitive resin laminate includes a support, an adhesive layer and a photosensitive resin layer. Vreeland only describes a support that has a total light transmission of not less than 60%. Vreeland does not describe or suggest a photosensitive resin laminate that has the claimed light transmission characteristics. Further, Vreeland fails to identify the total light transmission of the photosensitive resin laminate as an important characteristic. Accordingly, one of ordinary skill in the art would not be lead by Vreeland to produce a laminate with the claimed properties.

Consequently, the rejections of claims 1 and 11 as anticipated or obvious over

Vreeland should be withdrawn. The rejections of claims 2-5, 7-10, 12-15, 17, 19 and 20, which depend from claims 1 and 11, should be withdrawn for at least the same reasons.

Claims 1-5, 9-15 and 18-20 stand rejected under 35 USC 102(e) as being anticipated by Motoi. Claims 7 and 17 stand rejected under 103(a) as being obvious over Motoi. These rejections are respectfully traversed.

Motoi, like Vreeland, only describes a support having a total light transmission of not less than 70%. Motoi does not describe or suggest a photosensitive resin laminate that has the claimed light transmission characteristics. Further, Motoi fails to identify the total light transmission of the photosensitive resin laminate as an important characteristic. Accordingly, one of ordinary skill in the art would not be lead by Motoi to produce a laminate with the properties claimed in claims 1 and 11.

Consequently, the rejections of claims 1 and 11 as anticipated or obvious over Motoi should be withdrawn. The rejections of claims 2-5, 7, 9, 10, 12-15 and 17-20, which depend from claims 1 and 11, should be withdrawn for at least the same reasons.

Claims 1, 3-5, 11 and 13-15 stand rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Trout. This rejection is respectfully traversed.

Trout describes a photosensitive element for preparing a refractive-index image comprising a transparent support and a transparent photopolymerizable layer. Claims 1 and 11 claim a photosensitive resin laminate that has a specific light transmission characteristics. The photosensitive resin laminate includes a support, an adhesive layer and a photosensitive resin layer. Although Trout mentions that the support and the photopolymerizable layer are transparent, Trout fails to provide any description of the total light transmission of the photosensitive element. Consequently, Trout fails to describe or suggest a photosensitive resin laminate that has total light transmission within the ranges of claims 1 and 11.

In addition, claims 1 and 11 claim a photosensitive resin layer that has a thickness of not less than 500 μm . The thickness of the photopolymerizable layer in Trout is 1-100 μm (See Trout Col. 4, ll. 59-61), which is outside the claimed range.

Since Trout fails to disclose or suggest a photosensitive resin laminate that has the claimed total light transmission characteristics and the claimed resin layer thickness, the rejection of claims 1 and 11 over Trout should be withdrawn. The rejection of claims 3-5 and 13-15, which depend from claims 1 and 11, should be withdrawn for at least the same reasons.

Claims 1-3, 7, 11-13 and 17 stand rejected under 35 USC 103(a) as being unpatentable over Hephher. This rejection is respectfully traversed.

Hephher describes a photosensitive sheet product for dry transfer sheets that includes a translucent base, a keycoat and a photosensitive layer. Hephher states that the base is translucent and that the photosensitive layer is colorless. Hephher, however, does not describe the total light transmission of the photosensitive sheet product and the base, which would correspond to the photosensitive resin laminate of the present invention. Accordingly, Hephher fails to describe or suggest a photosensitive resin laminate that has total light transmission within the ranges of claims 1 and 11.

Since Hephher fails to disclose or suggest a photosensitive resin laminate that has the claimed total light transmission characteristics, the rejection of claims 1 and 11 over Trout should be withdrawn. The rejection of claims 2, 3, 7, 12, 13 and 17, which depend from claims 1 and 11, should be withdrawn for at least the same reasons.

Claims 1-5 and 11-15 stand rejected under 35 USC 102(b) as being anticipated by Hosokawa. This rejection is respectfully traversed. Hosokawa describes a transparent polycarbonate plate having a hard-coating layer. The hard-coating layer is formed by applying an active-energy-ray-curable coating composition to a polycarbonate plate. The polycarbonate plate corresponds to a support and the hard-coating layer corresponds to

the photosensitive resin laminate of the present invention.

Hosokawa only states that the polycarbonate plate itself is transparent. Hosokawa does not describe the total light transmission of the polycarbonate plate after forming the hard-coating layer. Accordingly, Hosokawa fails to describe or suggest a photosensitive resin laminate that has total light transmission within the ranges of claims 1 and 11.

In addition, claims 1 and 11 claim a photosensitive resin layer that has a thickness of not less than 500 μm . The thickness of the hard-coating layer in Hosokawa is 1-50 μm (See Hosokawa Col. 7, ll. 52-56), which is outside the claimed range.

Since Hosokawa fails to disclose or suggest a photosensitive resin laminate that has the claimed total light transmission characteristics and the claimed resin layer thickness, the rejection of claims 1 and 11 over Trout should be withdrawn. The rejection of claims 2-5 and 12-15, which depend from claims 1 and 11, should be withdrawn for at least the same reasons.

For the foregoing reasons, a notice of allowance is solicited.

In the event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **358362010500**.

Respectfully submitted,

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